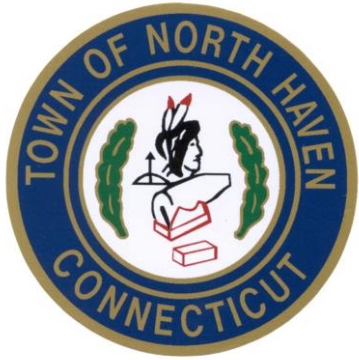


TOWN OF NORTH HAVEN, CONNECTICUT



STORMWATER MANAGEMENT PLAN

March 2017

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Introduction

This Stormwater Management Plan (SMP) was developed by the Town of North Haven to protect water quality and reduce the discharge of pollutants from the municipality's storm sewer system to the maximum extent practicable (MEP). This SMP addresses the requirements established by the State of Connecticut Department of Energy and Environmental Protection's (DEEP) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). This permit is the local enforcement mechanism of the United States Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES), Stormwater Phase II Rule.

SMP Structure

The plan outlines a program of Best Management Practices (BMPs), measurable goals, responsible individuals or departments, and implementation schedules for the following six (6) minimum control measures:

- (1) Public education and outreach;
- (2) Public involvement and participation;
- (3) Illicit discharge detection and elimination;
- (4) Construction site stormwater runoff control;
- (5) Post-construction stormwater management in new development and redevelopment;
and
- (6) Pollution Prevention and good housekeeping.

Appendices to this plan include the following maps: a USGS Quadrangle Map (Figure 1), a Natural Resources Map (Figure 2), and an Impaired Waterbodies Map (Figure 3).

Area(s) Subject to the Plan

The measures identified in this SMP will be applied throughout the boundaries of the Town of North Haven except as otherwise noted and they shall be consistent with the MS4 General Permit requirements. Stormwater discharge(s) from municipally-owned maintenance garages, salt sheds and other facilities subject to the DEEP Industrial Stormwater General Permit will continue to be regulated under the conditions of that permit.

SMP Development

A Stormwater Working Group led by the Department of Public Works and including representatives from the Town's Land Use Department, Field Operations Division, Engineering Department, Zoning Enforcement Officer and the Water Pollution Control Facility was assembled to coordinate the development and implementation of the SMP.

The SMP's implementation will be tracked and documented in Annual Reports, such as it is now and these reports will summarize stormwater management activities carried out by the Town

of North Haven and its partners. These reports will be submitted to the State of Connecticut DEEP on an annual basis, no later than April 1, and posted on the Town's website.

Description of Municipality

The operator of the MS4 is the Town of North Haven. The Town of North Haven is a public entity located in New Haven County, State of Connecticut. The Town of North Haven covers an area of approximately 21.1 square miles, located in South Central Connecticut as shown in Figure 1.

The Connecticut Department of Transportation (CT DOT) operates an MS4 on state highways located in the Town of North Haven. This system is regulated under the CT DOT's MS4 permit. Implementation of the BMPs identified in this plan will be coordinated between the Town of North Haven's Department of Public Works and CT DOT, Quinnipiac University and other private institutions where MS4s are maintained.

Impaired Waters

In preparing the SMP, the State of Connecticut's DEEP's Water Quality Standards were reviewed in order to determine the Surface Water Quality Classifications for each watercourse in town. Certain BMP's address the watersheds containing watercourses designated as "impaired" by the State of Connecticut DEEP. Table 1 below shows the water quality classification for each watershed.

TABLE 1 Water Quality Surface Classifications North Haven, CT			
Drainage Basin Number	Name	Surface Water Quality Classification	Impaired per Water Quality
5200-00_02	Quinnipiac River -	B	yes
5208-10_01	Eightmile Brook -	A	no
5208-11_01	Fivemile Brook - 01	A	no
5208-00_01	Muddy River - 01	B	no
5207-02_01	Allen Brook - 01	A	yes
5207-00_01	Wharton Brook - 01	A	no
5207-02_02	Allen Brook - 02	A	yes
5207-02-1-L1_01	Allen Brook Pond	A	yes
5208-00_02a	Muddy River - 02a	AA	yes
5302-00_02	Mill River - 02	AA	yes
5200-00_01	Quinnipiac River -	B	yes
C1_014-SB	LIS CB Inner Quinnipiac River (mouth)	SB	yes
5112-00_01	Farm River - 01	A	yes

Table 2 below summarizes the water bodies within or that run through the municipality that are listed on the 2014 List of Connecticut Water Bodies not meeting water quality standards and are designated as an “impaired” waterbody.

TABLE 2 North Haven Impaired Waterbody					
Waterbody ID	Water Segment Description	Water Segment Length (miles)	Impaired Use	Pollutant	Cause/Potential Source
Quinnipiac River - 02	From Toelles Road crossing (head of tide, just east of Route 15), Wallingford/North Haven town border, US to Hanover Pond outlet dam, Meriden. (Segment includes Community Lake portion)	8.5	Recreation	Escherichia Coli	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination
Allen Brook - 01	From mouth at confluence with Wharton Brook (east of Route 5, south of exit 13 on/off ramp, (I91), US to Allen Brook Pond outlet dam, Wallingford.	0.05	Recreation	Escherichia Coli	Wildlife, Pet Waste, Horse/Pet Farm, Unknown Sources
Allen Brook - 02	From inlet to Allen Brook Pond (south of exit 13 on/off ramp, I91), Wallingford/North Haven town borders, US to headwaters (under I91, and then parallel along east side, stays to west side of Rail Road track), Wallingford.	1.8	Recreation	Escherichia Coli	Wildlife, Pet Waste, Horse/Pet Farm, Unknown Sources
Allen Brook Pond	Impoundment of Allen Brook just US of mouth at confluence with Wharton Brook. Includes CT DEEP State swimming area and Trout Park within Wharton Brook State Park. Between Route 5 and I91 (exit 13), Wallingford/North Haven town lines.		Recreation	Escherichia Coli	Wildlife, Pet Waste, Horse/Pet Farm, Surface Water Base Flow (Allen Brook)
Farm River - 01	Saltwater limit a marsh, just DS of Main Street Anx. crossing, southwest of Lake Saltonstall outflow, East Haven, US parallel to lake around west side to confluence Burrs Brook parallel along Route 80 and DS of	6.14	Recreation	Escherichia Coli	Potential sources include illicit discharge, remediation sites, remediation sites, groundwater contamination, residential areas

Muddy River - 02a	Muddy River Pond inlet (east side of I91), North Haven, US to confluence with unnamed tributary (outlet for Tamara Swamp), just DS of Tyler Mill Road crossing, Wallingford.	8.1	Recreation	Escherichia Coli	
Mill River - 02	From inlet to Lake Whitney (east side of Route 15, just DS of Connolly Parkway crossing), Hamden, US to Cook Hill Road crossing, Cheshire.	9.06	Recreation	Escherichia Coli	Regulates urban runoff/storm sewers, combined sewer overflow, dry weather overflows, illegal connections to stormwater systems, pet waste, natural wildlife, on-site wastewater
Quinnipiac River - 01	From Sackett Point Road crossing (west of I91, and east of Route 15), North Haven, US to Toelles Road crossing (head of tide), Wallingford/North Haven town border.	5.05	Recreation	Escherichia Coli	Potential sources include industrial point source discharges, municipal discharges, landfills, illicit discharge, remediation sites, groundwater contamination
LIS CB Inner Quinnipiac River (mouth)	Central portion of LIS, Inner Estuary, from mouth at I95 crossing, US Quinnipiac River to Sackett Point Road (includes Mill River mouth BELOW Chapel Street crossing), North Haven.	0.63	Recreation	dissolved oxygen saturation, nutrient/eutrophication biological indicators; oxygen, dissolved; oil and grease; polychlorinated biphenyls; enterococcus	

The surface water classifications currently assigned to North Haven watercourses are defined below.

Class AA

Designated uses: existing or proposed drinking water supply, fish and wildlife habitat, recreational use (may be restricted,) agricultural and industrial supply. Discharges restricted to: discharges from public or private drinking water treatment systems, dredging and dewatering, emergency and clean water discharges.

Class A

Designated uses: potential drinking water supply; fish and wildlife habitat; recreational use; agricultural and industrial supply and other legitimate uses including navigation. Discharges restricted to: same as allowed in AA.

Class B

Designated uses: recreational use: fish and wildlife habitat; agricultural and industrial supply and other legitimate uses including navigation. Discharges restricted to: same as allowed in A and cooling waters, discharges from industrial and municipal wastewater treatment facilities (providing Best Available Treatment and Best Management Practices are applied), and other discharges subject to the provisions of section 22a-430 CGS.

Class SB

Designated uses: marine fish, shellfish and wildlife habitat, shellfish harvesting for transfer to approved areas for purification prior to human consumption, recreation, industrial and other legitimate uses including navigation. Discharges restricted to: same as for B surface waters.

Based on the DEEP Surface Water Quality Classifications, Muddy and Mill Rivers are identified as the surface water that should take the highest priority in Town's efforts to address stormwater impacts. This was taken into consideration as the BMPs were developed.

(1) Public Education and Outreach

This minimum control measure outlines a program to communicate common sources of stormwater pollution and the impacts of polluted stormwater to the public. This will be done through distributing educational materials to the Town of North Haven residents and businesses and by conducting outreach activities. The following BMPs and implementation schedule serve as the Town of North Haven's MS4 Public Education Program.

Goals:

- Raise public awareness that polluted stormwater runoff is the most significant source of water quality problems;
- Motivate residents to use Best Management Practices (BMPs) that reduce polluted stormwater runoff; and
- Reduce polluted stormwater runoff in the Town of North Haven as a result of increased awareness and utilization of BMPs.

1.1 Implement public education program

The Town of North Haven will collect and distribute stormwater educational materials that, at a minimum, address the impacts of the following on water quality: (1) pet waste, (2) impervious

cover, (3) application of fertilizers, (4) application of pesticides and herbicides, and (5) illicit discharges and (6) improper disposal of wastes into the MS4s.

The Town of North Haven maintains a link to UConn NEMO's comprehensive online library of stormwater educational material. The Town of North Haven's website, Department of Public Works Stormwater Section ([http://www.northhaven-ct.gov/government/town_departments/departments_\(m_r\)/public_works/storm_water/storm_water.php](http://www.northhaven-ct.gov/government/town_departments/departments_(m_r)/public_works/storm_water/storm_water.php)) will link directly to this web-based library and promote the availability of these materials. Additionally, the Department of Public Works Stormwater Section or other Town departments may include certain outreach materials to site plan review checklist(s) to address pollutants of concern. The Town of North Haven will also provide materials in a printed format to be on display in public locations within the North Haven Town Hall Annex and the Public Library.

Additional targeted outreach efforts will be completed by the Department of Public Works, Field Operations and Board of Education to provide education and materials to those K-12 students, agricultural operators, commercial businesses, site developers, and homeowners on particular aspects of stormwater management.

The Town of North Haven will coordinate with Department of Public Works, Land Use, Engineering, Field Operations, Zoning Enforcement, Board of Education and the Water Pollution Control Facility (WPCF) as well as local commissions (such as Inland Wetlands, Planning and Zoning, Conservation Commission, etc.) to ensure that all required topics listed in this plan are covered and tracked on an annual basis.

1.2 Address education and outreach for pollutants of concern

The Town of North Haven will distribute information on common sources of phosphorus, nitrogen, and bacteria pollution and how to prevent or reduce the amount reaching the MS4 areas and discharging into waterways.

The table below shows additional topics to be covered to address the phosphorus, nitrogen, and bacteria impairments that exist in the Town of North Haven.

Nitrogen	Bacteria
Septic systems	Septic systems
Fertilizer use	Sanitary cross connections
Grass clippings and leaves management	Waterfowl
Discharge of sediment (to which Nitrogen binds) from Construction sites	Pet waste
Other erosive surfaces	Manure piles associated with livestock and horses

Public outreach and education schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Implement public education program	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2018 and continue until permit expires	Continue to implement public education programs.
Address education / outreach for pollutants of concern	DPW/Lynn Sadosky	July 1, 2018 and continue until permit expires	Continue to address education / outreach to Town residents and businesses for pollutants of concern.

(2) Public Involvement and Participation

This minimum control measure identifies the process for public involvement and participation

Goals:

- Involve the community in planning and implementing the town's stormwater management activities.
- Provide a minimum 60 day notice to the public for this plan and annual reports.

in the town's stormwater management efforts.

2.1 Comply with public notice requirements for the Stormwater Management Plan and Annual Reports

The Town of North Haven will publish a public notice on its website ([http://www.northhaven-ct.gov/government/town_departments/departments_\(m_-_r\)/public_works/storm_water/storm_water.php](http://www.northhaven-ct.gov/government/town_departments/departments_(m_-_r)/public_works/storm_water/storm_water.php)), through an email or mailing list, and in a newspaper. (*North Haven Courier*). The notice will provide a contact name, tele phone number, address, and electronic mail address to whom the public can send comments in regard to the SMP. Additionally, this plan and the Annual Reports will be publicly accessible on the Town's website [[http://www.northhaven-ct.gov/government/town_departments/departments_\(m_-_r\)/public_works/storm_water/storm_water.php](http://www.northhaven-ct.gov/government/town_departments/departments_(m_-_r)/public_works/storm_water/storm_water.php)] and in North Haven Town Hall Annex and the North Haven Public Library. The public notice will allow for a sixty (60) day comment period, at a minimum.

Public involvement and participation schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Comply with public notice requirements for the SMP and Annual Reports	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2017 and continue until permit expires	In April 2017, the Town of North Haven shall comply with the Public Notice requirements and publish the SMP online and in a local newspaper as required.
...			

(3) Illicit Discharge Detection and Elimination (IDDE)

This minimum control measure outlines a program to detect and eliminate current illicit discharges to the MS4 and prevent further illicit discharges in the future. All activities for this measure will be completed in the Town of North Haven's priority areas (urbanized area, catchment areas with Directly Connected Impervious Area (DCIA) > 11%, and outfalls that discharge to impaired waters).

3.1 Develop written IDDE plan

The Town of North Haven will develop a written IDDE plan to detect, locate and eliminate illicit discharges (to the maximum extent practicable) from the MS4 within the Town of North Haven's priority areas. The IDDE plan will provide enforceable legal authority to eliminate illicit discharges, assign responsibilities, and include the development of a citizen reporting program. The plan will also outline the outfall screening and IDDE protocols consistent with Appendix B of the MS4 General Permit to identify, prioritize, and investigate MS4 catchments for suspected illicit discharge of pollutants. Also, the IDDE plan will outline follow-up screening and illicit discharge prevention procedures.

3.2 Develop list and map of all MS4 outfalls and interconnections in priority areas

The Town of North Haven will complete a database of all stormwater discharges from a pipe or conduit located within and owned or operated by the municipality and all interconnections with other MS4s. Each entry will include:

- Type, material, size, shape and location (identified with a latitude and longitude) of conveyance, outfall or channelized flow (e.g. 24" concrete pipe);
- the name, water body ID and Surface Water Quality Classification of the immediate surface waterbody or wetland to which the stormwater runoff discharges;
- if the outfall does not discharge directly to a named waterbody, the name and water body ID of the nearest named waterbody to which the outfall eventually discharges;

- d. the name of the watershed, including the sub regional drainage basin number (available from CT ECO at www.cteco.uconn.edu) in which the discharge is located;
- e. date of most recent inspection of the outfall, the condition, and any indicators of potential non-stormwater discharges as of most recent inspection;

The database will be updated and exported into an Excel format for the purposes of including it in the Town's annual reports.

3.3 Develop citizen reporting program

The Town of North Haven will establish a system to allow for citizen reporting of suspected illicit discharges into the stormwater system. The system will include an address, electronic mail address and telephone number on the Town's website for submitting a report. The Town of North Haven will affirmatively investigate and eliminate any illicit discharges for which a time and location of discharge are provided. The Town of North Haven will promptly inspect the reported outfall or manhole and proceed according to the requirements of the written IDDE program. All citizen reports and responses will be included in the Town of North Haven's annual report.

3.4 Establish legal authority to prohibit illicit discharges

The Town of North Haven will establish the necessary and enforceable legal authority by statute, Town ordinance, rules and regulations, permit, easement, contract, order or any other means, to eliminate illicit discharges within the Town's limits. The authority will:

- a. prohibit illicit discharges to its storm sewer system and require removal of such discharges consistent with the deadlines outlined in the MS4 general; and
- b. authorize the investigation of suspected illicit discharges and elimination of illicit discharge, including from properties not owned or controlled by the MS4 that discharge to the MS4;
- c. control the discharge of spills and prohibit the dumping or disposal of materials including, but not limited to, residential, industrial and commercial wastes, trash, used motor vehicle fluids, pesticides, fertilizers, food preparation waste, leaf litter, grass clippings, and animal wastes into its MS4; and
- d. authorize appropriate enforcement procedures and actions; and
- e. authorize fines or penalties and/or recoup costs incurred by the permittee from anyone creating an illicit discharge or spilling or dumping.

3.5 Develop record keeping system for IDDE tracking

The Town of North Haven will keep a record of illicit discharge abatement activities, including location (including latitude and longitude or address), description, date(s) of inspection, sampling data (if applicable), action(s) taken, date of removal or repair and responsible party.

In addition, the Town of North Haven will continue to maintain a Sanitary Sewer Overflow (SSO) inventory that records the location, date and time of occurrence, estimated volume of discharge, a description of known or suspected cause, and details about mitigating measures including dates of implementation.

This inventory will also:

- include all known SSOs to their MS4 in the past 5 years (July 1, 2012 – June 30, 2017);
- continue to be updated to track future SSOs; and
- include information in Annual Reports.

3.6 Address IDDE in areas with pollutants of concern

The Town of North Haven will identify which areas in town are most likely to contribute nitrogen, phosphorus and bacteria to the MS4. This assessment will consider: historic on-site sanitary system failures, proximity to bacterial impaired waters, low infiltrative soils, and shallow groundwater. Any areas determined to have a high potential for septic system failure will be reported to the Quinnipiac Valley Health District for corrective action.

3.7 Detailed MS4 infrastructure mapping

The Town of North Haven will revise a detailed map of the MS4s to include:

- Components of the MS4 within priority areas shall include:
 - Outfalls and receiving waters;
 - Pipes;
 - Open channel conveyances;
 - Catch basins;
 - Manholes;
 - Interconnections with other MS4s and other storm sewer systems (if known);
 - Municipally-owned stormwater treatment structures (e.g. detention & retention ponds, infiltration systems, bioretention areas, water quality swales, gross particle separators, oil/water separators, or other systems);
 - Catchment delineations for each outfall;
 - Impaired water bodies identified by name and use impairment as defined by the most recent integrated water quality report;
 - Municipal sanitary sewer system (if available);
 - Municipal combined sewer system (if known or applicable).

The Town of North Haven will update the map as new information becomes available and will report on the progress of the development of this map in the annual report each year.

Illicit discharge detection and elimination schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Develop written IDDE program	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2018	The Town of North Haven shall prepare a written IDDE plan in accordance with the requirements set forth in the MS4 regulations.
Develop list and maps of all MS4 stormwater outfalls in priority areas	DPW/Lynn Sadosky	July 1, 2019	Develop list and maps of all MS4 stormwater outfalls as required.
Develop citizen reporting program	DPW/Lynn Sadosky	July 1, 2018	Develop citizen reporting program, Town response and recording program will also be developed.
Establish legal authority to prohibit illicit discharges	DPW/Lynn Sadosky	July 1, 2018	Establish legal authority via an enforceable Town Ordinance and Regulations
Develop record keeping system for IDDE tracking	DPW/Lynn Sadosky	July 1, 2017	Develop record keeping system and include in annual reports.
Address IDDE in areas with pollutants of concern	DPW/Lynn Sadosky	July 1, 2017	Prioritize catchment investigations to address IDDE in known areas of pollutant of concern.
Detailed MS4 infrastructure mapping	DPW/Lynn Sadosky	July 1, 2020	Develop detailed MS4 Map and update as new information becomes available.
Complete list and maps of all MS4 stormwater outfalls throughout municipality	DPW/Lynn Sadosky	July 1, 2022	Complete list and map of all MS4s throughout Town of North Haven.
...			

(4) Construction Site Stormwater Runoff Control

This minimum control measure outlines procedures for minimizing polluted stormwater runoff from activities that disturb one or more acres of land. In the Town of North Haven, this is

Goal:

Minimize polluted stormwater runoff from construction sites and prevent it from carrying sediment into waterways via MS4 infrastructure.

determined on a site by site basis OR collectively as part of a larger plan.

4.1 Implement, upgrade and enforce land use regulations (or other legal authority) to meet requirements of MS4 general permit

The Town of North Haven will update regulations to establish the legal authority to control stormwater runoff from construction sites by requiring:

- a. developers, construction site operators, or contractors maintain consistency with the 2002 Guidelines for Soil Erosion and Sedimentation Control, as amended, the Connecticut Stormwater Quality Manual, and all stormwater discharge permits issued by the DEEP within the municipal or institutional boundary pursuant to CGS 22a-430 and 22a-430b;
- b. the implementation of additional measures to protect/improve water quality (in addition to the above requirements) as deemed necessary by the Town of North Haven;
- c. the Town of North Haven as the authorized party to carry out all inspection, surveillance and monitoring procedures necessary to determine compliance with municipal regulations, Town Ordinances or programs or institutional requirements related to the management of the Town of North Haven's MS4. Inspections shall be conducted, where allowed, to inventory the number of privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive drainage from the permittee's MS4;
- d. the owner of a site seeking development approval from the Town of North Haven shall provide and comply with a long term maintenance plan and schedule to ensure the performance and pollutant removal efficiency of privately-owned retention ponds, detention ponds and other stormwater basins that discharge to or receive discharge from the Town of North Haven's MS4 including short-term and long-term inspection and maintenance measures to be implemented by the private owner; and
- e. the Town of North Haven will control, through interagency or inter-jurisdictional agreements, the contribution of pollutants between the permittee's MS4 and MS4s owned or operated by others.

4.2 Develop and implement plan for interdepartmental coordination of site plan review and approval

The Town of North Haven's plan is to coordinate the functions of all the departments and boards involved in the review, permitting, and/or approval of land disturbance projects as follows:

Site plans are reviewed by Town staff on behalf of the Planning and Zoning Commission and Inland Wetlands and Watercourses Commission for compliance with local, state and federal regulations, and good engineering practices.

4.3 Review site plans for stormwater quality concerns

The Town of North Haven will conduct site plan reviews that incorporate consideration of stormwater controls or management practices to prevent or minimize impacts to water quality on sites with soil disturbance of one acre or more. The Town of North Haven will develop and implement a plan to conduct site inspections to assess the adequacy of the installation,

maintenance, operation, and repair of construction and post construction control measures and take enforcement action when necessary.

4.4 Conduct site inspections

The Town of North Haven will develop and implement a plan to perform construction site inspections and take enforcement actions, if necessary to ensure the adequacy of the installation, maintenance, operation, and repair of all construction and post-construction runoff control measures.

4.5 Implement procedure to allow public comment on site development

The Town of North Haven's procedure for public involvement in proposed and ongoing development and land disturbance activities is as follows:

Information submitted by the public is forwarded to the Public Works Department, Land Use Department within the town for consideration. Information related to construction site runoff is also forwarded to the Zoning Enforcement Officer and Town Engineer.

4.6 Implement procedure to notify developers about DEEP construction stormwater permit

The Town of North Haven will notify site developers and contractors of their potential obligation to obtain authorization under the State of Connecticut DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities (construction general permit) if their project disturbs more than 1 acre of land and results in a point source discharge to Connecticut surface waters directly or through the North Haven MS4. The Town of North Haven will also require a copy of the Storm Water Pollution Control Plan be made available to the Town on request. The procedure to notify developers of the construction general permit is as follows:

The Town of North Haven will inform site developers (working with the municipality) that they have a potential obligation to obtain authorization under the State of Connecticut DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities ("construction general permit") if their development or redevelopment project disturbs one or more acres of land, either individually or collectively, as part of a larger common plan, and results in a point source discharge to the surface waters of the state directly or through the permittee's MS4. The notification shall include a provision informing the developer/ contractor of their obligation to provide a copy of the Storm Water Pollution Control Plan (required by the construction general permit) to the permittee upon request.

The contractor is required at all times to conduct his/her operations in conformity with all Federal and State permit requirements concerning water, air, noise pollution and the disposal of contaminated, or hazardous materials.

Construction site stormwater management schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Implement, upgrade and enforce land use regulations to meeting MS4 permit requirements	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2019	Develop, implement and enforce land use regulations.
Develop/implement plan for interdepartmental coordination in site plan review and approval	DPW/Lynn Sadosky	July 1, 2017	Develop and implement plan for interdepartmental coordination in site plan review.
Review site plans for stormwater quality concerns	DPW/Lynn Sadosky	July 1, 2017	Perform site plan reviews to address stormwater quality issues.
Conduct site inspections	DPW/Lynn Sadosky	July 1, 2017	Conduct inspections in accordance with the plan.
Implement procedure to allow public comment on site development	DPW/Lynn Sadosky	July 1, 2017	Review and consider public comments on site development.
Implement procedure to notify developers about DEEP construction stormwater permit	DPW/Lynn Sadosky	July 1, 2017	Continue to notify developers about DEEP permit requirements.
...			

(5) Post-construction Stormwater Management in New Development or Redevelopment

This minimum control measure outlines the Town of North Haven's program to address stormwater runoff from new or re-development projects that disturb one or more acres of land.

5.1 Establish legal authority and guidelines regarding Low Impact Development (LID) and runoff reduction in site development planning

The Town of North Haven will establish the legal authority by Town Ordinance, bylaw, regulation, standard condition of approval, or other means to require, to the MEP, developers and contractors seeking the town's approval to consider the use of Low Impact Development (LID) and runoff reduction site planning and development practices that meet or exceed those LID and runoff reduction practices in the State of Connecticut Stormwater Quality Manual prior

to other stormwater management practices allowed in the Town of North Haven's Land Use regulations, guidance or construction project requirements.

This legal authority will include the following standards:

- 1) for redevelopment of sites that are currently developed with Directly Connected Impervious Area (DCIA) of forty percent or more, the project must retain on-site half the water quality volume for the site, or
- 2) for new development and redevelopment of sites with less than forty percent DCIA, retain the water quality volume for the site, or
- 3) if those retention standards cannot be met, the developer will be required to provide a report indicating why the standard could not be met and a mitigation project on another property or pay a fee to fund a DCIA retrofit.

In developing this legal authority, the Town of North Haven will consider the following watershed protection elements to manage the impacts of stormwater on receiving waters:

- a. Minimize the amount of impervious surfaces (roads, parking lots, roofs, etc.) within each municipality by minimizing the creation, extension, and widening of parking lots, roads, and associated development and encourage the use of Low Impact Development or green infrastructure practices.
- b. Preserve, protect, create and restore ecologically sensitive areas that provide water quality benefits and serve critical watershed functions. These areas may include, but are not limited to; riparian corridors, headwaters, floodplains and wetlands.
- c. Implement stormwater management practices that prevent or reduce thermal impacts to streams, including requiring vegetated buffers along waterways, and disconnecting discharges to surface waters from impervious surfaces such as parking lots.
- d. Seek to avoid or prevent hydro-modification of streams and other water bodies caused by development, including roads, highways, and bridges.
- e. Implement standards to protect trees, and other vegetation with important evapotranspirative qualities.
- f. Implement policies to protect native soils, prevent topsoil stripping, and prevent compaction of soils.
- g. Coordinate with state or local health officials to ensure no interference with performance of on-site septic systems.
- h. Limit turf areas.

In addition, the Town of North Haven will review its current Ordinances - site planning requirements, zoning regulations, street design regulations, and infrastructure specifications with minimum size criteria for impervious cover (roads, parking lots, etc.) to identify and, where appropriate, reduce or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices to the MEP.

5.2 Implement long-term maintenance plan for stormwater basins and treatment structures

The Town of North Haven will develop a maintenance plan for retention and detention ponds and stormwater treatment structures that it owns or over which it holds an easement or other authority and that are located in the Town of North Haven's priority areas to ensure their long-term effectiveness. This plan will require an annual inspection of those retention and detention ponds and stormwater treatment structures and removal of accumulated sediment and pollutants in excess of 50% design capacity.

5.3 Directly Connected Impervious Area (DCIA) mapping

The Town of North Haven will follow guidance provided by the State of Connecticut DEEP and UConn CLEAR to calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls. Progress on this task will be documented in each Annual Report until completion.

5.4 Address post-construction issues in areas with pollutants of concern

For areas contributing to waters where **Nitrogen, Phosphorus or Bacteria** is a Stormwater Pollutant of Concern and erosion or sedimentation problems are found during the annual inspections conducted under the long-term maintenance plan described in BMP 5.2, the Town of North Haven will prioritize those areas for the DCIA retrofit program under minimum control measure 6 – Pollution Prevention/Good Housekeeping.

Post-construction stormwater management schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Establish or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2021	Update guidelines to promote evaluation and incorporation of LID Practices during site plan review process.
Enforce LID/runoff reduction requirements for development and redevelopment projects	DPW/Lynn Sadosky	July 1, 2021	Enforce LID/Reduction Requirements.
Implement long-term maintenance plan for stormwater basins and treatment structures	DPW/Lynn Sadosky	July 1, 2019	Implement long term maintenance plan during site plan review process.
Complete DCIA mapping	DPW/Lynn Sadosky	July 1, 2020	Complete DCIA mapping.
Address post-construction issues in areas with pollutants of concern	DPW/Lynn Sadosky	July 1, 2019	Address post-construction issues during site plan review process.
...			

(6) Pollution Prevention / Good Housekeeping

This minimum control measure outlines a program to mitigate the impact of town operations and maintenance on town owned and/or operated properties and the MS4 itself to water quality.

The Town of North Haven will implement an operations and maintenance (O and M) program to prevent or reduce pollutant runoff from town owned facilities and to protect water quality.

6.1 Develop and implement formal employee training program

The Town of North Haven will continue with its MS4 training program for Town employees and to increase awareness of water quality issues. Training will include:

- Standard operating procedures consistent with the MS4 general permit;
- General goals and objectives of this Stormwater Management Plan;
- Identification and reporting of illicit discharges and improper disposal; and
- Spill response protocols and responsibilities.

These trainings may also include regional or statewide trainings coordinated by UConn CLEAR or others.

The Town of North Haven has and will continue to use an outside consultant to complete this task.

6.2 Implement MS4 property and operations and maintenance

Town of North Haven -owned and/or -operated properties, parks, and other facilities that are owned, operated, or otherwise the legal responsibility of the Town of North Haven will be maintained so as to minimize the discharge of pollutants to its MS4. Such maintenance will include, but not be limited to:

(i) Parks and open space

The Town of North Haven will optimize the application of fertilizers by municipal employees, institutional staff, or private contractors on lands and/or easements for which it is responsible for maintenance.

Optimization practices considered may include:

- conducting soil testing and analysis to determine soil phosphorus levels;
- the reduction or elimination of fertilizers;
- reduction of fertilizer usage by adhering to the manufacturers' instructions,
- use of alternative fertilizers forms (i.e. products with reduced, slow-releasing, or insoluble phosphorus compositions);
- proper storage and application practices (i.e. avoid impervious surfaces);

- application schedule (i.e. appropriate season or month) and timing (i.e. coordinated with climatic conditions to minimize runoff potential);
- standard operating practices for the handling, storage, application, and disposal of pesticides and herbicides in compliance with applicable state and federal laws;
- evaluating reduced mowing frequencies and use of alternative landscaping materials like drought resistant and native plantings; and
- establish procedures for management of trash containers at parks (scheduled cleanings; sufficient number).

The Town of North Haven will continue practices for the proper disposal of grass clippings and leaves at North Haven-owned lands. Clippings shall be composted or otherwise appropriately disposed. Clippings will not enter the MS4 system or waters of the state.

(ii) Pet waste management

The Town of North Haven will identify locations where inappropriate pet waste management practices are immediately apparent and pose a threat to receiving water quality due to proximity and potential for direct conveyance of waste to its storm system and waters. In such areas, the Town of North Haven will, implement targeted management efforts such as public education and enforcement (e.g. increased patrol for violators).

In North Haven-owned recreational areas where dog walking is allowed, North Haven will continue to install educational signage, pet waste baggies, and disposal receptacles (or require carry-out).

The Town of North Haven will document its efforts in its annual reports. North Haven will consider including information regarding the scope and extent of its education, compliance, and enforcement efforts (including the number of violations pursued and fines levied or other enforcement taken).

(iii) Waterfowl management

The Town of North Haven will identify lands where waterfowl congregate and feeding by the public occurs.

To raise awareness regarding the water quality impacts, the Town of North Haven will continue to install signage or use other targeted techniques to educate the public about the detrimental impacts of feeding waterfowl (including the resulting feces deposition) and discourage such feeding practices.

The Town of North Haven will also implement practices that discourage the undesirable congregation of waterfowl in these areas, or otherwise isolate the direct drainage from these areas away from its storm system and waters.

(iv) North Haven Buildings and facilities (schools under the jurisdiction of the Town of North Haven, town offices, police and fire stations, pools, parking garages and other North Haven - owned or operated buildings or utilities)

The Town of North Haven will:

- evaluate the use, storage, and disposal of both petroleum and non-petroleum products and ensure, through employee training, that those responsible for handling these products know proper procedures for spill prevention;
- ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the North Haven Fire Department, as necessary;
- develop management procedures for dumpsters and other waste management equipment;
- sweep parking lots and keep areas surrounding the facilities clean to minimize runoff of pollutants; and
- ensure that all interior building floor drains are not connected to the MS4 and are appropriately permitted.

(v) Vehicles and Equipment

The Town of North Haven will:

- establish procedures for the storage of North Haven -owned or -operated vehicles;
- require vehicles with fluid leaks to be stored indoors or in contained areas until repaired;
- evaluate fueling areas owned by North Haven and used by North Haven owned or - operated vehicles and if possible, place fueling areas under cover in order to minimize exposure;
- establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters; and
- ensure any interior floor drains are appropriately permitted.

(vi) Leaf Management

The Town of North Haven will continue to implement procedures to minimize or prevent the deposition of leaves in catch basins, streets, parking lots, driveways, sidewalks or other paved surfaces that discharge to the MS4. Such procedures shall also apply to leaves collected by the Town of North Haven.

6.3 Implement coordination with interconnected MS4s

The Town of North Haven will coordinate with operators of interconnected MS4s (such as neighboring municipalities, institutions (Quinnipiac University) and the CT DOT) regarding the

contribution of potential pollutants from the storm sewer systems, contributing land use areas and stormwater control measures in the respective MS4s. This same coordination shall be conducted regarding operation and maintenance procedures utilized in the respective systems.

6.4 Develop and implement a program to control other sources of pollutants to the MS4

The Town of North Haven will develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by a State of Connecticut DEEP stormwater permit.

6.5 Evaluate additional measures for discharges to impaired waters

(i) For waters for which **Nitrogen** is a Stormwater Pollutant of Concern:

On Town of North Haven -owned or -operated lands, North Haven shall implement turf management practices and procedures/policy which includes, but is not limited to, procedures for proper fertilizer application and the planting of native plant materials to lessen the amount of turf area requiring mowing and the application of chemicals. Each Annual Report will discuss the actions taken to implement this policy with an estimate of fertilizer and turf reduction.

(ii) For waters for which **Bacteria** is a Stormwater Pollutant of Concern:

On Town of North Haven -owned or -operated lands with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), the Town of North Haven will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Each Annual Report will identify problem areas, where applicable, for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(i), the cost of such retrofit or program, and the anticipated pollutant reduction. On Town of North Haven -owned or -operated lands, prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations. Each Annual Report will discuss the actions taken to implement this program.

6.6 Track projects to disconnect DCIA

The Town of North Haven will annually track the total acreage of Directly Connected Impervious Area (DCIA) that is disconnected from the MS4 as a result of redevelopment or retrofit projects within the town. For each retrofit/redevelopment project, the Town of North Haven will document the amount of existing DCIA that is disconnected. The total amount of disconnected DCIA will be reported each year in the Annual Report. Starting on July 1, 2021, North Haven's goal will be to reduce 1% of its total DCIA acreage per year to the maximum extent possible.

North Haven will provide updates on this goal in its annual report. The Town of North Haven will also incorporate all DCIA disconnections which occurred in the town since July 1, 2012, where applicable, towards meeting this goal.

6.7 Develop and implement an infrastructure repair, rehabilitation and retrofit program

The Town of North Haven will begin a program to identify MS4 structures to repair, rehabilitate, or upgrade to reduce or eliminate the discharge of pollutants into water bodies. This program will be responsive to new information on outfalls discharging pollutants, impaired waters, inspections, or observations made during outfall mapping under the IDDE section of this plan.

6.8 Develop and implement plan to identify and prioritize retrofit projects

The Town of North Haven will develop a Retrofit Project Plan to identify and prioritize potential DCIA disconnection projects. Prioritization will be based on several factors, including whether the project lies within one of the MS4 priority areas (urbanized area, DCIA > 11%, discharge to impaired waters). The Town of North Haven will include in its annual report for the third year of the permit (2020-2021) its identification and prioritization process, a rationale for the selection of projects to be implemented, and the total acres of DCIA to be disconnected upon implementation. The implementation of projects in this plan will begin by June 30, 2022.

6.9 Develop and implement street sweeping program

The Town of North Haven will continue and update, as necessary, a program to provide for regular inspection and maintenance of North Haven-owned or -operated streets, roadways, parking areas and other MS4 infrastructure.

The Town of North Haven will continue to implement procedures for street sweeping town-owned or operated streets, roadways and parking lots. All streets, roadways and parking lots within the MS4 Priority Areas will be inspected, swept and/or cleaned (as necessary) at least once per year in the spring following the cessation of winter maintenance activities (i.e. sanding, deicing, etc.). The procedures shall also include more frequent inspections, cleaning and/or sweeping of targeted areas determined by the Town of North Haven to have increased pollutant potential based on the presence of active construction activity or other potential pollutant sources. The Town of North Haven will identify such potential pollutant sources based upon surface inspections, catch basin cleaning or inspection results, land use, winter road deicing and/or sand application, impaired or TMDL waters or other relevant factors as determined by North Haven. If wet dust suppression is conducted, the use of water will be minimized such that a discharge of excess water to surface waters and/or the storm sewer system does not occur.

For streets and parking lots outside the MS4 Priority Areas, including any rural uncurbed streets and parking lots with no catch basins, the Town of North Haven will either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted street sweeping and/or cleaning plan for those areas by June 30, 2018 and submit such plan with its year one Annual Report. For new and redeveloped municipal parking lots, the Town of North Haven will evaluate options for reducing stormwater runoff to surface waters and/or the storm sewer system by the installing pervious pavements and/or other measures to promote sheet flow of stormwater.

- a. The Town of North Haven will ensure the proper disposal of street sweepings in accordance with State of Connecticut DEEP policies, guidance and regulations. Street sweepings shall not be discharged back into the storm drain system and/or surface waters.
- b. The Town of North Haven will document results of its street sweeping program in its annual reports including: a summary of inspection results, curb miles swept, dates of cleaning, volume or mass of material collected, and method(s) of reuse or disposal. The Town of North Haven will also include documentation of any alternate street sweeping plan for rural uncurbed streets and any runoff reduction measures implemented.

6.10 Develop and implement catch basin cleaning program

The Town of North Haven will conduct routine cleaning of all catch basins and track catch basin inspection observations. Utilizing information compiled through its inventory of catch basins, operational staff and public complaints, the Town of North Haven will optimize routine cleaning frequencies for particular structures or catchment areas as follows to maintain acceptable sediment removal efficiencies:

- a. Inspect all Town of North Haven -owned catch basins within MS4 Priority Areas at least once by June 30, 2020. Catch basins outside the MS4 Priority Areas shall be inspected by June 30, 2022.
- b. Prioritize inspection and maintenance for Town of North Haven -owned catch basins located near impaired waters and construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Town of North Haven personnel will clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
- c. Establish a schedule such that the frequency of routine cleaning will ensure that no catch basin at any time will be more than fifty (50) percent full. A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.
- d. If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections/cleaning events, the Town of North Haven will document that finding,

investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources. The Town of North Haven will describe any actions taken in its Annual Report.

- e. The Town of North Haven will detail its plan for optimizing catch basin cleaning, inspection plans, and its schedule for gathering information to develop the optimization plan in its first annual report. Documentation shall include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4. The Town of North Haven will continue to keep a log of catch basins cleaned or inspected.
- f. The Town of North Haven will report in each Annual Report the total number of catch basins, number inspected, number cleaned, the total volume or mass of material removed from all catch basins and, if practicable, the volume or mass of material removed from each catch basin draining to water quality limited waters.

6.11 Develop and implement snow management practices

(i) Deicing Material Management

The Town of North Haven will continue standard operating practices for the use, handling, storage, application, and disposal of deicing products such as treated salt.

(ii) Snow and Ice Control Practices

The Town of North Haven will continue its standard operating practices regarding its snow and ice control to minimize the discharge of anti-icing or de-icing chemicals and other pollutants (while maintaining public safety).

The Town of North Haven will maintain records of the application rates of anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet established goals.

The Town of North Haven will ensure the proper training for deicing applications for municipal employees, institutional staff, or private contractors on lands and easements for which it is responsible for maintenance.

The Town of North Haven will manage and dispose of snow accumulations in accordance with DEEP's Best Management Practices for Disposal of Snow Accumulations from Roadways and Parking Lots, revised 2/4/11 and as amended (see link at: www.ct.gov/deep/stormwater).

In its Annual Report, the Town of North Haven will document results of its snow removal program including, at a minimum: the type of staff training conducted on application methods and equipment, type(s) of deicing materials used; lane-miles treated; total amount of each deicing material used; type(s) of deicing equipment used; any changes in deicing practices (and the reasons for the change); and snow disposal methods.

6.12 Interconnected MS4s

The Town of North Haven will coordinate with operators of interconnected MS4s (such as neighboring municipalities, institutions such as Quinnipiac University and the CT DOT) regarding the contribution of potential pollutants from the storm sewer systems, contributing land use areas and stormwater control measures in the respective MS4s. This same coordination will be conducted regarding operation and maintenance procedures utilized in the respective systems.

6.13 Sources contributing pollutants to the MS4

The Town of North Haven will develop and implement a program to control the contribution of pollutants to its MS4 from commercial, industrial, municipal, institutional or other facilities, not otherwise authorized by permit issued pursuant to Sections 22a-430 or 22a-430b of the Connecticut General Statutes.

6.14 Additional measures for discharges to impaired waters (with or without a TMDL)

(i) For waters for which Nitrogen is a Stormwater Pollutant of Concern:

On Town of North Haven -owned or -operated lands, North Haven will implement a turf management practices and procedures policy, which includes, but is not limited to, procedures for proper fertilizer application and the planting of native plant materials to lessen the amount of turf area requiring mowing and the application of chemicals. Annual Reports will discuss the actions taken to implement this policy with an estimate of fertilizer and turf reduction.

(ii) For waters for which Bacteria is a Stormwater Pollutant of Concern:

On Town of North Haven owned or operated lands with a high potential to contribute bacteria (such as dog parks, parks with open water, sites with failing septic systems), North Haven will develop, fund, implement, and prioritize a retrofit or source management program to correct the problem(s) within a specific timeframe. Annual Reports will identify problem areas for which a retrofit or source management program were developed, the location of the closest outfall monitored in accordance with Section 6(i), the cost of such retrofit or program, and the anticipated pollutant reduction. On North Haven -owned or -operated lands, the Town of North Haven will prohibit the feeding of geese or waterfowl and implement a program to manage geese and waterfowl populations. Annual Reports will discuss the actions taken to implement this program.

Pollution prevention/ good housekeeping schedule

BMP	Lead department / individual	Month / year of implementation	Measurable goal
Develop/implement formal employee training program	Department of Public Works (DPW)/Lynn Sadosky	July 1, 2017	Continue and conduct annual training for Town of North Haven employees.
Implement MS4 property and operations maintenance	DPW/Lynn Sadosky	July 1, 2017	Continue O&M practices.
Implement coordination with interconnected MS4s	DPW/Lynn Sadosky	July 1, 2017	Coordinate with MS4s.
Develop/implement program to control other sources of pollutants to MS4	DPW/Lynn Sadosky	July 1, 2017	Develop and implement program to control other sources of pollutants.
Evaluate additional measures for discharges to impaired waters	DPW/Lynn Sadosky	July 1, 2017	Evaluate measures for discharges to impaired waters in the Town of North Haven.
Track projects the disconnect DCIA	DPW/Lynn Sadosky	July 1, 2017	Record and track DCIA Projects in Annual Report.
Develop/implement infrastructure repair/rehab program	DPW/Lynn Sadosky	July 1, 2017	Develop/implement repair and rehab program, where applicable.
Develop/implement plan to identify/prioritize retrofit projects	DPW/Lynn Sadosky	July 1, 2020	Develop and Implement a Plan to prioritize retrofit projects.
Develop/implement street sweeping program	DPW/Lynn Sadosky	July 1, 2017	Continue annual street sweeping program.
Develop/implement catch basin cleaning program	DPW/Lynn Sadosky	July 1, 2017	Optimize program to clean so CBs are less than 50% full.
Develop/implement snow management practices	DPW/Lynn Sadosky	July 1, 2017	Continue to implement snow management practices.

Outfall Monitoring

The Town of North Haven will monitor and investigate all MS4 outfalls that discharge to impaired waterbodies by the end of the permit term. Using the outfall inventory developed under the IDDE minimum control measure, the Town of North Haven will identify which outfalls discharge to impaired waters and monitor them for the specific impairments.

Once half of all outfalls discharging to impaired waterbodies have been monitored, the 6 outfalls contributing the highest level of pollutants will be identified and monitored on an annual basis.

Based on the monitoring results, the Town of North Haven will investigate the drainage areas of outfalls that are contributing to the impairment. The investigations may consider land use or development patterns, business or commercial activities, industrial activities, DCIA, natural contributors, MS4 maintenance issues, residential activities, or anything else potentially contributing to the source of the impairment.

maintenance issues, residential activities, or anything else potentially contributing to the source of the impairment.

Based on results of the drainage area investigations, North Haven will implement measures to address sources of the impairments including the specific impaired waters provisions described within the permit control measures.

Plan Amendments

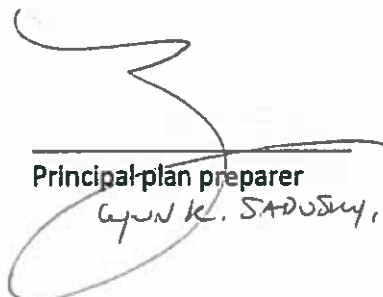
The Town of North Haven will amend the SMP whenever:

- (1) there is a change, which has the potential to cause pollution of the waters of the state; or
- (2) the actions required by the Plan fail to prevent pollution of the waters of the state or fail to otherwise comply with any other provision of this general permit; or
- (3) the State of Connecticut DEEP Commissioner requests modification of the Plan.

Stormwater Management Plan Signatures

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

 Chief Elected Official/ Principal Executive Officer	<u>3/29/17</u> Title FIRST SELECTMAN	<u>3/29/17</u> Date
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 Principal plan preparer LYNN K. SADUSKY, P.E.	<u>DIRECTOR PUBLIC WORKS</u> Title	<u>03/29/17</u> Date
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Stormwater Management Plan Engineering Certification

"I hereby certify that I am making this certification in connection with a registration under the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems, submitted to the Commissioner by Lynn K. Sadosky, P.E. for an activity located at or within the Town of North Haven and that all terms and conditions of the general permit are being met for all discharges which have been created, initiated or maintained and such activity is eligible for authorization under such permit. I further certify that a system is in place to ensure that all terms and conditions of this general permit will continue to be met for all discharges authorized by this general permit at the site. I certify that I have personally examined and am familiar with the information that provides the basis for this certification, including but not limited to all information described in Section 3(b)(8)(A) of such general permit, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining such information, that the information upon which this certification is based is true, accurate and complete to the best of my knowledge and belief. I certify that I have made an affirmative determination in accordance with Section 3(b)(8)(B) of this general permit. I understand that the registration filed in connection with such general permit is submitted in accordance with and shall comply with the requirements of Section 22a-430b of Connecticut General Statutes, as amended by Public Act 12-172. I also understand that knowingly making any false statement made in the submitted information and in this certification may be punishable as a criminal offense, including the possibility of fine and imprisonment, under section 53a-157b of the Connecticut General Statutes and any other applicable law."

Roy Seelye, PE

Name

Senior Project Manager

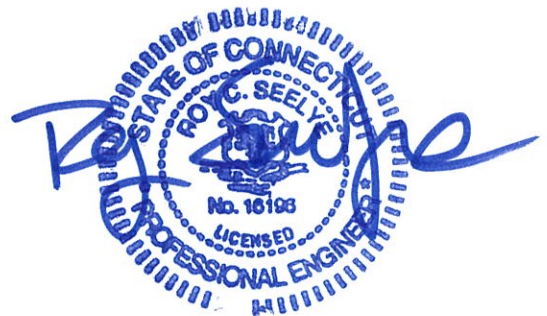
Title

BETA Group, Inc.

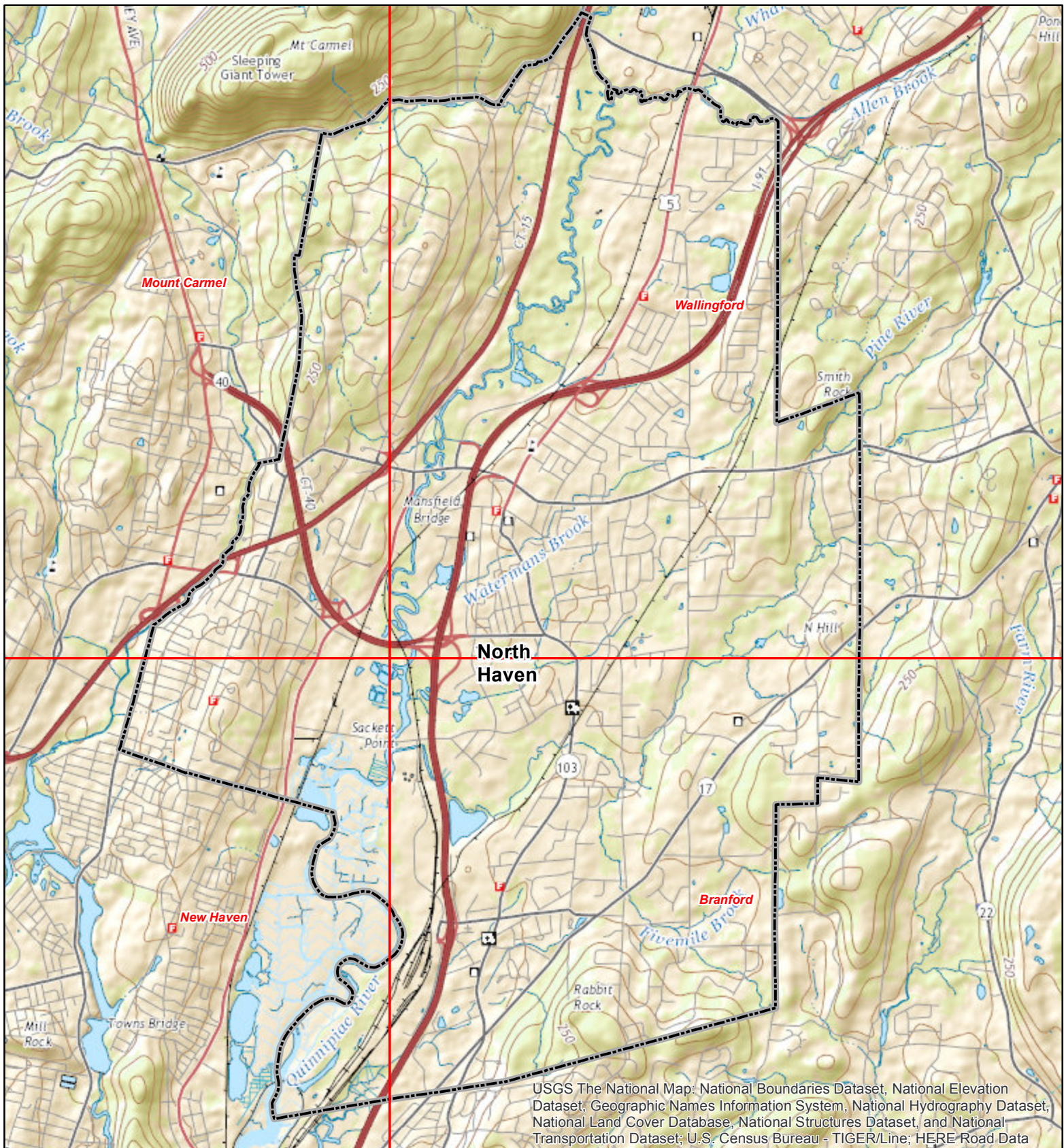
Company

3/29/2017

Date



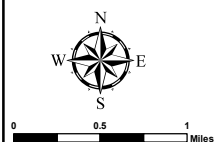
FIGURES



Legend

- ▬ Quadrant Boundary
- Town Boundary

March 28th, 2017



BETA
ENGINEERING SUCCESS TOGETHER

USGS Topo Information

USGS 7.5 Minute
North Haven, CT
Created: 1984

Quadrants Used:

1. Branford
2. New Haven
3. Mount Carmel
4. Wallingford

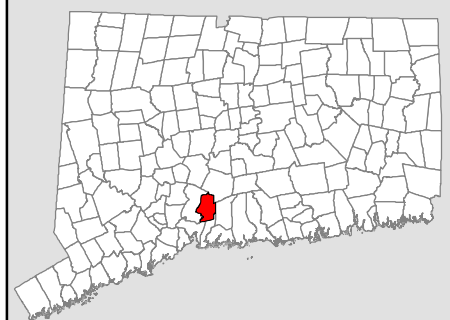


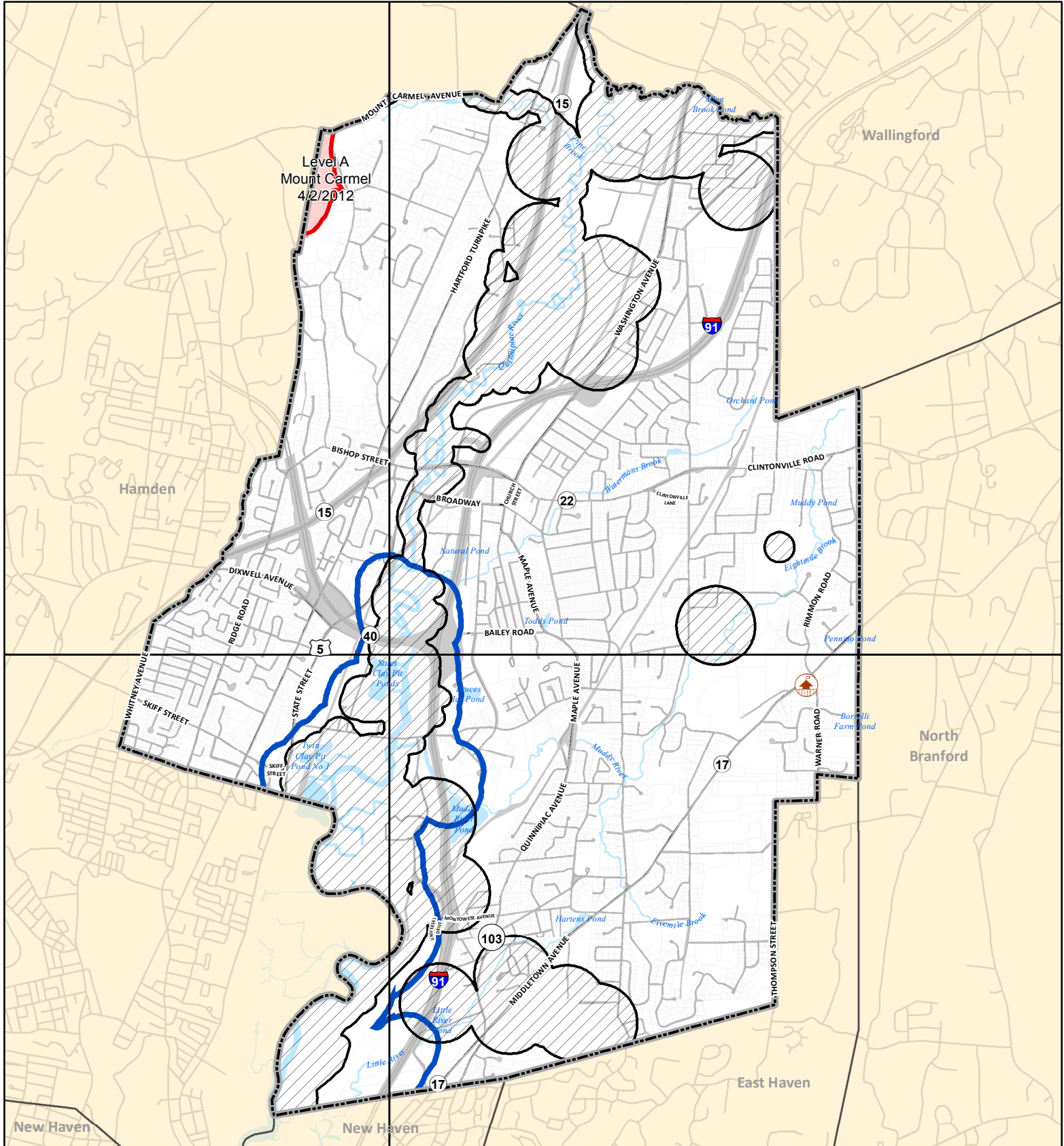
Town of North Haven, Connecticut
MS4 Stormwater Permit

Figure 1: North Haven Site Locus Map
USGS Quadrangle

*Source: Basemap - USGS TMN (The National Map) Topo, National Boundaries Dataset, National Elevation Dataset, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; U.S. Census Bureau - TIGER/Line; HERE Road Data.
Other Layers derived from CT DEEP master database and Town provided data.

Site Location





Legend

- Historical Structures
- Natural Diversity Area
- Final Adopted Aquifer Protection Area
- Coastal Boundary
- Quadrant Boundary
- Water
- Town Boundary

March 28th, 2017

Quadrants Used:

1. Branford
2. New Haven
3. Mount Carmel
4. Wallingford

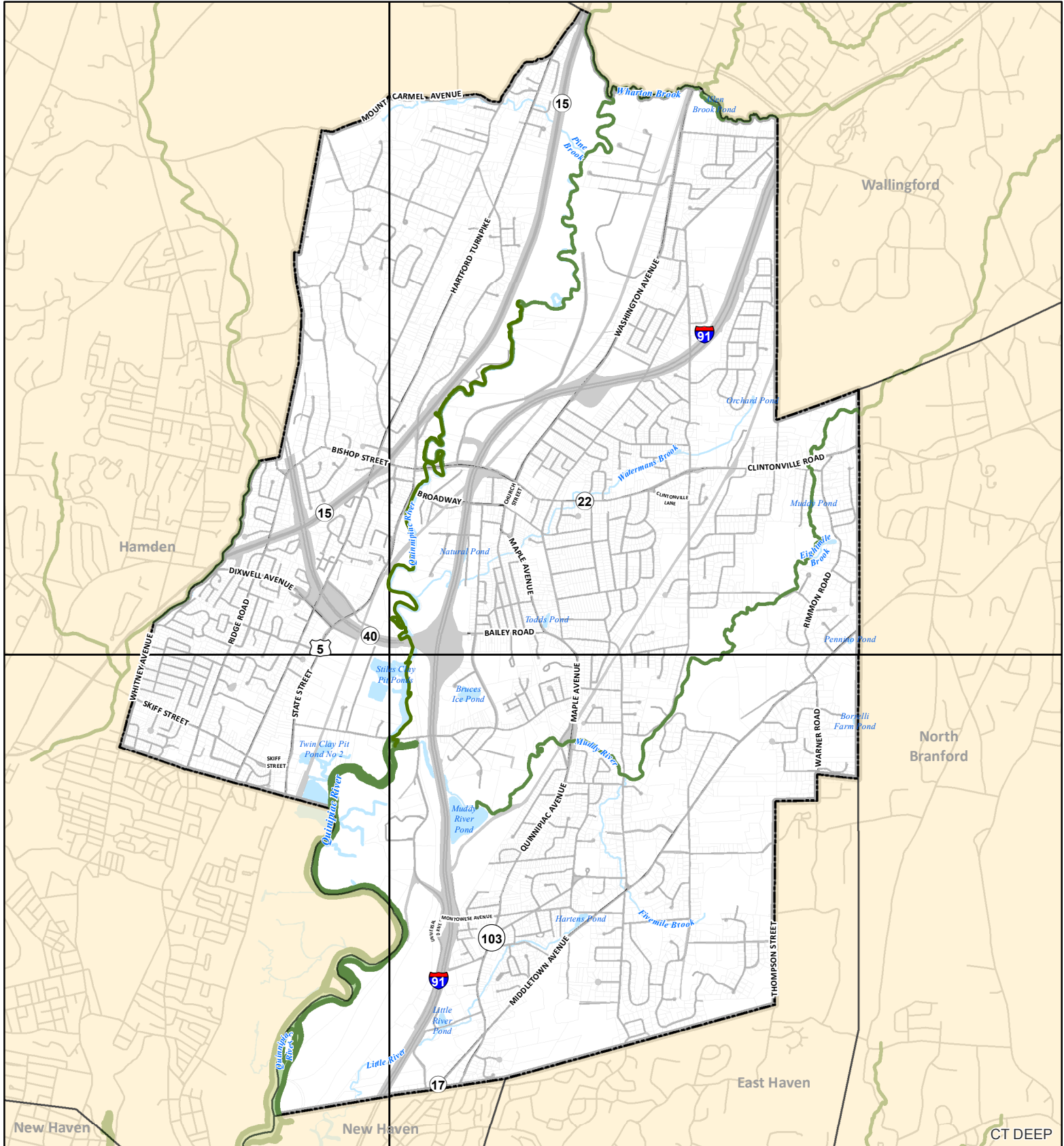
BETA
ENGINEERING SUCCESS TOGETHER

Town of North Haven, Connecticut
MS4 Stormwater Permit

Figure 2: Natural Resources Map

*Source: Base map was compiled with layers from the CT DEEP master database, CT 911 centerline and provided Town data. Other Layers derived from CT DEEP master database: Natural Diversity Area database, Aquifer Protection, Coastal Boundary, Quadrant Boundary, Hydro features. U.S. USGS 1:24,000 Topographic Quadrangle Series Indexes represents the geographic extent of USGS 1:24,000 topographic maps (7.5- by 7.5-minute quadrangles) for the coterminous U.S. forty-eight states and District of Columbia.

Site Location



Legend

- Impaired River 2014
- Impaired Lake 2014
- Impaired Estuary 2014
- Water
- Quadrant Boundary
- Town Boundary

March 28th, 2017



0 0.5 1 Miles

BETA
ENGINEERING SUCCESS TOGETHER

Quadrants Used:

1. Branford
2. New Haven
3. Mount Carmel
4. Wallingford



Town of North Haven, Connecticut
MS4 Stormwater Permit

Figure 3: Impaired Waterbodies Map Water Quality Surface Classifications:

Connecticut 305(b) Assessed Waters 2014 includes rivers, lakes and estuaries that have been assessed in compliance with Sections 305(b) and 303(d) of the federal Clean Water Act. Section 305(b) of the Clean Water Act requires each state to monitor, assess and report on the quality of its waters relative to attainment of designated uses established by the State's water quality standards. Section 303(d) requires each State to compile a subset of that list identifying only those waters not meeting water quality standards and assign a Total Maximum Daily Load (TMDL) priority ranking to each impaired waterbody. Connecticut 303(d) Impaired Waters 2014 is a subset of Connecticut 305(b) Assessed Waters 2014. If one of the designated uses is categorized as not Fully Supporting the assessed waterbody is considered impaired. Source: CT ECO

*Source: Basemap was compiled with layers from the CT DEEP master database, 2016 CT 911 centerline, Town provided data., USGS 1:24,000 Topographic Quadrangle Series Indexes. The impaired waterbodies data was provided by CT CO GIS Server; https://cteco.uconn.edu/ctmaps/rest/services/Water_Resources/Assessed_and_Impaired_Waterbodies_2014

Site Location

